

WHAT IS CLAIMED IS:

1. A method for forming a metal coating, comprising the steps of:  
forming a coating layer, with an ink paint that is soluble in a rinsing solution principally including alcohol, over a surface of a component element on which a base layer for a wiring pattern is provided;  
removing entirely or partially the coating layer disposed on the base layer;  
forming an electroless metal coating over the surface of the component element; and  
rinsing the component element with the electroless metal coating thereon with the rinsing solution to remove the coating layer and the electroless metal coating attached onto the coating layer.
2. The method according to Claim 1, wherein the removing step uses a dry blasting process with particles or a wet blasting process with a mixture of a solution and particles.
3. The method according to Claim 1, wherein the component element is a chip electronic component including an internal conductor disposed therein.
4. The method according to Claim 1, wherein the component element includes one of a single layer substrate and a multi-layer substrate, and the component element includes one of a resin and a ceramic.
5. The method according to Claim 1, wherein the ink paint includes a maleic acid resin.
6. The method according to Claim 1, wherein the rinsing step includes performing an ultrasonic-rinsing process with isopropyl alcohol being used as the rinsing solution.

7. The method according to Claim 1, further comprising a step of immersing the component element in a Pd solution before the electroless metal coating-forming step.

8. A method for forming a metal coating, comprising the steps of:  
forming a coating layer over a surface of a component element with an ink paint that is soluble in a rinsing solution principally including alcohol;  
removing the coating layer disposed on a region of the component element on which a metal coating is to be formed;  
forming an electroless metal coating on the component element; and  
rinsing the component element with the electroless metal coating thereon with the rinsing solution to remove the coating layer and the electroless metal coating attached on the coating layer.

9. The method according to Claim 8, wherein the removing step uses a dry blasting process with particles or a wet blasting process with a mixture of a solution and particles.

10. The method according to Claim 8, wherein the component element is a chip electronic component including an internal conductor disposed therein.

11. The method according to Claim 8, wherein the component element includes one of a single layer substrate and a multi-layer substrate, and the component element includes one of a resin and a ceramic.

12. The method according to Claim 8, wherein the ink paint includes a maleic acid resin.

13. The method according to Claim 8, wherein the rinsing step includes performing an ultrasonic-rinsing process with isopropyl alcohol being used as the rinsing solution.

14. The method according to Claim 8, further comprising a step of immersing the component element in a Pd solution before the electroless metal coating-forming step.

15. A method for manufacturing chip electronic component including a component element with an internal conductor disposed therein, and external electrodes each disposed on corresponding ends of the component element and electrically connected to the internal conductor, the method comprising the steps of:

forming a coating layer over a surface of the component element with an ink paint that is soluble in a rinsing solution principally including alcohol;

removing the coating layer disposed on a region of the component element on which the external electrodes are to be formed;

forming an electroless metal coating over the entire surface of the component element; and

rinsing the component element with the electroless metal coating thereon with the rinsing solution to remove the coating layer on a region on which no external electrode is to be formed and the electroless metal coating attached onto the coating layer portion.

16. The method according to Claim 15, further comprising a step of polishing the component element with a rotating barrel to remove the coating layer and the electroless metal coating disposed on the coating layer portion, after the rinsing step.

17. The method according to Claim 15, wherein the rinsing step includes a step of polishing the component element with a rotating barrel to remove the coating layer and the electroless metal coating disposed on the coating layer portion.

18. The method according to Claim 15, wherein the removing step uses a dry blasting process with particles or a wet blasting process with a mixture of a solution and particles.

19. The method according to Claim 15, wherein the ink paint includes a maleic acid resin.

20. The method according to Claim 15, wherein the rinsing step includes the step of performing an ultrasonic-rinsing process with isopropyl alcohol being used as the rinsing solution.

21. The method according to Claim 15, further comprising a step of forming the external electrodes by applying a metal coating in an electrolytic plating process on the electroless metal coating which defines a base electrode.

22. The method according to Claim 15, further comprising a step of immersing the component element in a Pd solution before the electroless metal coating-forming step.

23. The method according to Claim 15, wherein the component element includes a coil embedded into a magnetic resin including a resin and magnetic powder dispersed therein, and the external electrodes are each electrically connected to the corresponding ends of the coil exposed at both ends of the component element.

24. A method for manufacturing chip electronic component including a component element with an internal conductor disposed therein, and external electrodes each disposed on corresponding ends of the component element and electrically connected to the internal conductor, the method comprising the steps of:

forming a coating layer over a surface of the component element with an ink paint that is soluble in a rinsing solution principally including alcohol;

removing the coating layer disposed on a region of the component element on which the external electrodes are to be formed;

rinsing the component element with the rinsing solution to remove the coating layer on a region on which no external electrode is to be formed;

and forming electroless metal coating on a region of the component element on which the external electrodes are to be formed.

25. The method according to Claim 24, wherein the removing step uses a dry blasting process with particles or a wet blasting process with a mixture of a solution and particles.

26. The method according to Claim 24, wherein the ink paint includes a maleic acid resin.

27. The method according to Claim 24, wherein the rinsing step includes performing an ultrasonic-rinsing process with isopropyl alcohol being used as the rinsing solution.

28. The method according to Claim 24, further comprising a step of forming the external electrodes by applying metal coating in an electrolytic plating process on the electroless metal coating which defines a base electrode.

29. The method according to Claim 24, further comprising a step of immersing the component element in a Pd solution before the electroless metal coating-forming step.

30. The method according to Claim 24, wherein the component element includes a coil embedded into a magnetic resin including a resin and magnetic powder dispersed therein, and the external electrodes are each electrically connected to the corresponding ends of the coil exposed at both ends of the component element.